DOCUMENT RESUME

ED 031 060 EF 003 469

Storage Study.
California Univ., Berkeley. Univ. Residential Building System.
Spons Agency-Educational Facilities Labs., Inc., New York, N.Y.
Report No-URBS-Pub-4
Pub Date Oct 67
Note-44p.
EDRS Price MF-$0.25 HC-$2.30
Descriptors-Building Equipment, *College Housing, Design Preferences, Dormitories, Females, Furniture Design, Interior Space, Males, *Physical Design Needs, Questionnaires, Research Projects, *Space Utilization, Standards, *Storage, *Student Needs, Student Opinion

Detailed information concerning the kinds and quantities of possessions of a representative group of University of California students is presented. The findings permit appraisal of the degree of effectiveness of existing student storage elements. Inventory questionnaires were distributed to single students on four University of California campuses during the months of January 1967. The campuses involved were Davis, Los Angeles, Riverside, and Santa Barbara. A summary of the tabulated information appears in sections 4 and 5. The questionnaire further gave an opportunity to obtain useful information about student living habits and student opinions about their living quarters. In planning the student room, consideration must be given not only to the qualitative adaptability of furniture but also a quantitative adaptability so that the student may add or subtract storage furnishings as needed to accommodate his possessions. There appears to be a need for furnishings which can further permit each student to personalize his room by allowing the storage of possessions according to his own preference. In developing storage, the primary focus should be on possessions which are frequently used and must, therefore, be immediately accessible. (RK)

EDO 31060

OCTOBER 1967

URBS PUBLICATION 4

# STORAGE STUDY

EF 0034469

UNIVERSITY RESIDENTIAL BUILDING SYSTEM
A Project of the UNIVERSITY OF CALIFORNIA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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# UNIVERSITY RESIDENTIAL BUILDING SYSTEM

A Project Of

THE UNIVERSITY OF CALIFORNIA

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Berkeley, California 94720

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This Project Supported By
EDUCATONAL FACILITIES LABORATORIES, INC.
New York, New York

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## PREFACE

The primary purpose of this Storage Study was to obtain detailed information concerning the kinds and quantities of possessions of a representative group of University of California students.

A corollary benefit is that the findings permit appraisal of the degree of effectiveness of existing student storage elements.

We are indebted to many for assistance in the collection, verification and computation of data. Special appreciation is directed to:

Fred A. Schwendiman, Director of Auxiliary Services,
Brigham Young University, Provo, Utah
Adolph T. Brugger, Dean of Students,
University of California, Riverside
J. R. Kropf, Residence Halls Administrator,
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Ivan F. Richards, Dean of Students
University of California, Davis
C. C. Tucker, Residence Halls Coordinator,
University of California, Statewide

Miss Arlene Goldstrom coordinated the study for the consultant, Building Systems Development, Inc., San Francisco.

R. Clayton Kantz
Project Director

STUDENT STORAGE STUDY

1. Background
2. Method
3. Summary of Findings
4. Inventory Summary - Men
5. Inventory Summary - Women
6. Graphic Illustrations of Storage Requirements
7. Tabulation of Questionnaire Responses

Appendix:
Inventory and Questionnaire Form

# 1. BACKGROUND

The University Residential Building System (URBS) Project for the University of California is developing a system of building components to be used in the construction of housing for 4,500 to 9,000 students. The buildings, scheduled for occupancy between 1970 and 1973, are expected to provide a variety of housing for both single and married students.

The URBS Project commenced with the development of the User Requirements[1] --a study of the environmental needs of those students living in and using university student housing. The User Requirements noted two major requirements of the contemporary student that new housing must accommodate. These are: (1) his desire for individual recognition and expression, and (2) his increasing affluence as evidenced by the number of his possessions. The objectives of URBS, accordingly, include increasing the variety of building types and configurations to reduce the institutional atmosphere of the residence hall, and providing for adaptability within the buildings to allow for individual tastes as well as student preferences and campus policies that change over time.

The URBE building components are Structure-Ceiling, Heating-Ventilating-Cooling, Partitions, Bathrooms and Furnishings. These components will provide for structures that may range from one to thirteen stories in height. The majority of partitions will be demountable, by university or contracting personnel. All furniture will be movable, giving each student the freedom to determine the arrangement of his own room.

In the course of developing performance specifications for the furnishings, numerous discussions were held with university representatives, and a great deal of literature was reviewed. Certain elements in the student room seemed adequate, others, while marginal, suggested their own further development.

Storage, on the other hand, seemed inadequate,[2] but no basic research was available for validation or development. Since possessions are the reason for storage, and since people use their possessions to personalize their environment, it was felt that the most meaningful research could be carried out by the students themselves.

[1] URBS Publication 2, October 1967

[2] Figure No. One shows the typical provision of furniture in a University of California residence hall.

For a more detailed presentation of existing storage elements, see the URBS Student Housing Cost Study, October 1967, URBS Publication No. 3.

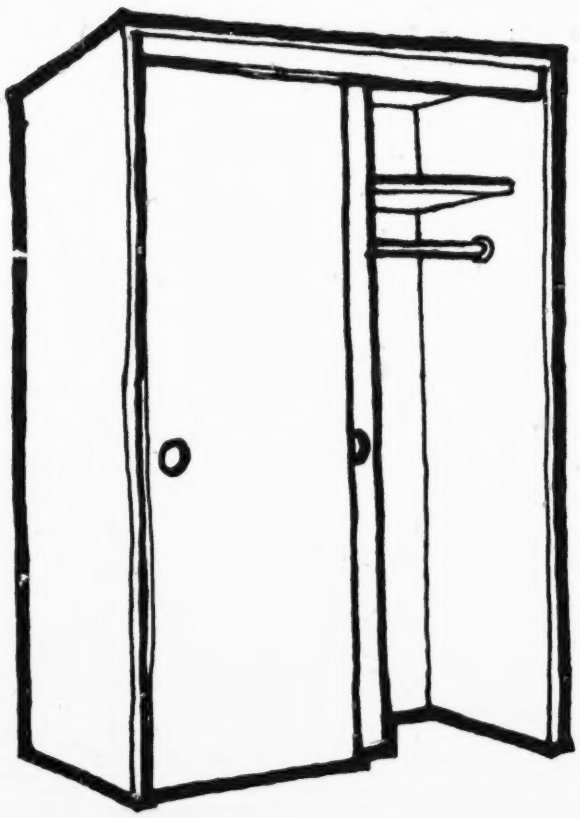
## 2. METHOD

The primary objective of the storage study was to obtain detailed information concerning the kinds and quantities of possessions of a representative group of University of California students. Inventory questionnaires were distributed to single students on four University of California campuses during the month of January 1967. The campuses involved were Davis, Los Angeles, Riverside and Santa Barbara. The same questionnaire was distributed at Brigham Young University, Provo, Utah. A summary of the tabulated information appears in Sections 4 and 5 hereafter. The questionnaire further gave an opportunity to obtain useful information about student living habits and student opinions about their living quarters. This information is regarded as supplementary to the inventory of possessions. Although it is not statistically significant, it does have relevance as a supplement to the User Requirements Study.[3]

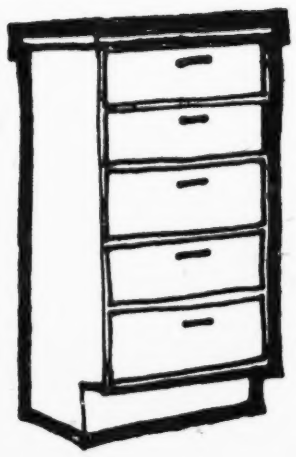
[3]See Appendix for a sample of the Inventory and Questionnaire.

FIGURE NO. ONE

TYPICAL PRESENT PROVISION OF FURNITURE
IN A
UNIVERSITY OF CALIFORNIA RESIDENCE HALL



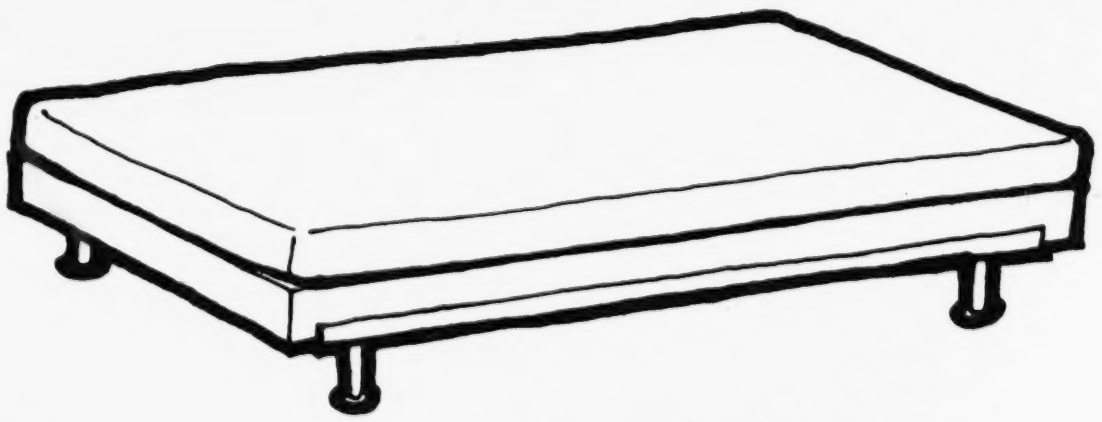
Wardrobe
96"H, 48"W, 25"D



Dresser
38"H, 28"W, 20"D

Desk 29"H, 42"W, 24"D

Chair 18"H, 20"W, 20"D



Bed 18"H, 38"W, 82"L

## 3. SUMMARY OF FINDINGS

The variety of students, climate and social conditions represented at the four campuses of the University of California suggests that the basic findings may generally apply to other colleges and universities as well. Although the inventories from Brigham Young University closely followed the University of California patterns, it would be advisable to do an inventory sample in other particular campus situations.

The most striking aspect of the results is the wide range in quantity of possessions among individual students. For example, the number of suits owned by male students at Los Angeles campus ranged from one to eleven, shirts at the Santa Barbara campus ranged from seven to thirty-five, the number of dresses at the Davis campus ranged from one to twenty-seven. This strongly indicates that in planning the student room, one must take into account not only qualitative adaptability of furniture--its ability to fit into many arrangements--but also a quantitative adaptability so that the student may add or subtract storage furnishing as needed to accommodate his possessions.

The students' comments on their storage facilities yielded a combined number of ninety-eight requests for additional closet, shelf and/or drawer space. Obviously, storage requirements frequently are not met at present.

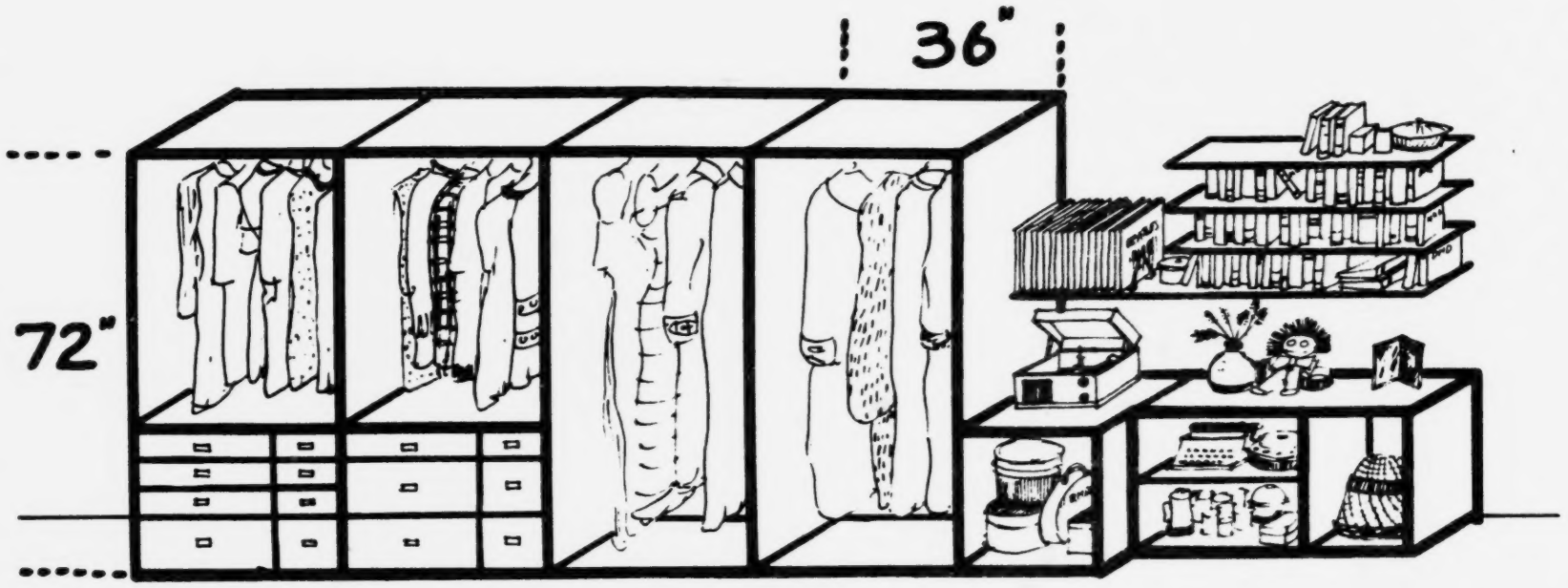
There appears to be a need for furnishings which can further permit each student to personalize his room by allowing the storage of possessions according to his own preference, e.g., to hang shirts or shorts, or to fold them in drawers; to keep a musical instrument in closed storage, on a shelf, or on the floor.

As might be expected, girls have more possessions than boys. This applies both to clothes and to additional miscellaneous items such as hairdryers and sewing equipment. A striking example of this difference in requirements is that for total hanging space at the Riverside campus the average requirement for the girls was 123.9 cubic feet, while that for the men was only 54.4 cubic feet.[4]

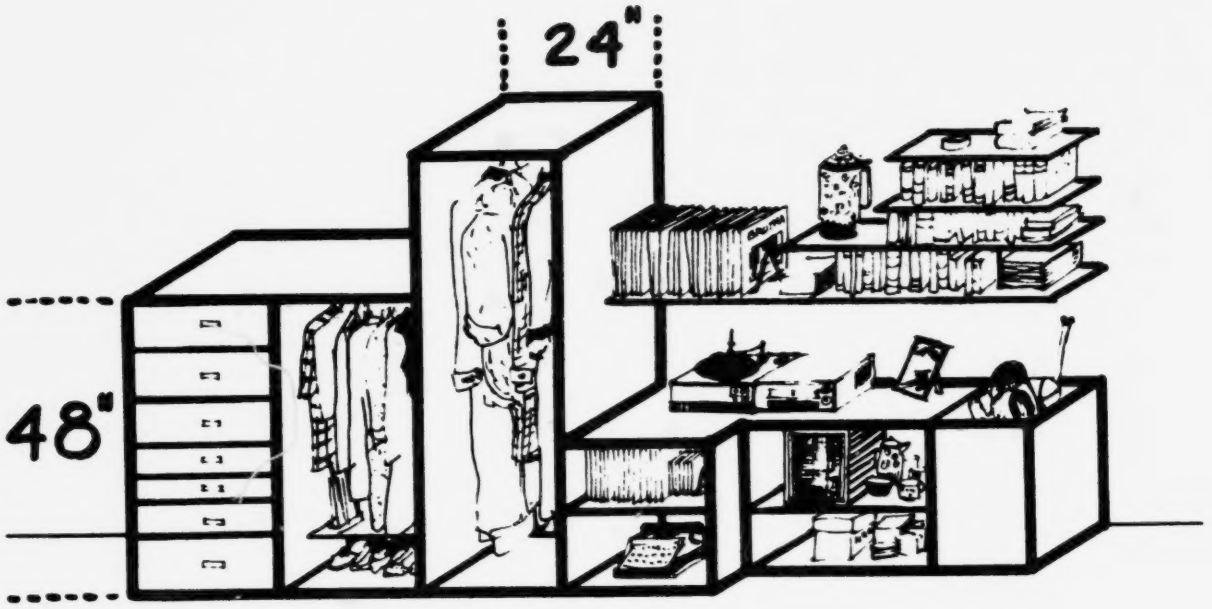
In developing storage, the primary focus is on possessions which are frequently used and must, therefore, be immediately accessible. There are wide choices for storing lesser used and/or seasonal items. For example, storage rooms on the same floor or in a basement may be provided. Two-thirds of the respondents said they would prefer to store some items elsewhere if this would provide more space in the room. Such items included luggage, sports equipment and formals. However, a number of students had reservations about security for items stored in common spaces.

[4]Fig. No. Two shows in graphic form the average storage requirements for men and women at the Riverside campus.

The quantity of furnishings that students now bring into their rooms suggests the advisability of providing additional floor space in student rooms or elsewhere. Of the ninety-three students responding, eighty-three had their own blankets, fifty had their own lamp, thirteen had wastebaskets, twelve had chairs and three brought their own rugs.




WOMEN'S AVERAGE




MEN'S AVERAGE

FIGURE NO. TWO

STORAGE REQUIREMENTS OF MEN AND WOMEN
(Data is from the Riverside Campus)

## 4. INVENTORY SUMMARY - MEN

The following Table No. One summarizes the quantities of possessions for men on the four University of California campuses. The quantities are expressed as the low, the high, and as an average.

No discernible pattern of quantities relating to academic class level was discovered. Therefore this summary does not include the student's class level.

TABLE NO. ONE
INVENTORY SUMMARY - MEN

NUMBERS SHOW QUANTITY OF LISTED ITEMS PER STUDENT

| | DAVIS | | | LOS ANGELES | | | RIVERSIDE | | | SANTA BARBARA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HIGH | LOW | AVE | HIGH | LOW | AVE | HIGH | LOW | AVE | HIGH | LOW | AVE |
| Suits | 2 | 0 | 1.3 | 11 | 1 | 2.0 | 7 | 1 | 3 | 3 | 0 | 1.3 |
| Sport coats | 4 | 0 | 2.1 | 8 | 1 | 2.6 | 3 | 0 | 1.7 | 4 | 1 | 1.9 |
| Jackets | 5 | 1 | 2.6 | 3 | 1 | 2.7 | 3 | 2 | 2.5 | 7 | 1 | 3 |
| Slacks | 8 | 1 | 3.6 | 8 | 1 | 4.7 | 8 | 3 | 5.5 | 8 | 1 | 4.5 |
| Overcoat | 1 | 0 | .6 | 2 | 0 | .7 | 1 | 0 | .5 | 2 | 0 | .7 |
| Raincoat | 1 | 1 | 1 | 2 | 0 | .7 | 1 | 1 | 1 | 1 | 0 | .5 |
| Robe | 2 | 0 | .7 | 2 | 0 | .7 | 1 | 1 | 1 | 1 | 0 | .5 |
| Pants, jeans | 11 | 3 | 5.3 | 12 | 0 | 3.9 | 6 | 3 | 4.2 | 9 | 3 | 5 |
| Shirts | 31 | 10 | 14.8 | 22 | 6 | 11.7 | 20 | 16 | 17.7 | 35 | 7 | 20.3 |
| Shorts | 3 | 0 | 1.8 | 4 | 0 | 1.9 | 4 | 0 | 1.7 | 5 | 2 | 3.3 |
| Sweaters | 8 | 3 | 5 | 10 | 1 | 4.1 | 6 | 2 | 4.5 | 13 | 1 | 5.6 |
| Sweatshirts | 7 | 0 | 3 | 3 | 0 | 1 | 2 | 0 | 1.5 | 3 | 1 | 1.8 |
| T-Shirts | 22 | 2 | 10.6 | 20 | 2 | 12.2 | 14 | 5 | 9 | 18 | 4 | 10.6 |
| Undershorts | 22 | 2 | 9.9 | 24 | 8 | 14.3 | 11 | 7 | 8.2 | 16 | 7 | 11.9 |
| Pajamas | 3 | 0 | 1.3 | 4 | 1 | 1.5 | 3 | 1 | 2 | 4 | 0 | 1.6 |
| Socks | 30 | 7 | 13 | 25 | 8 | 14.5 | 14 | 8 | 11.2 | 20 | 8 | 12.7 |
| Gloves | 3 | 0 | .7 | 2 | 0 | .5 | 2 | 0 | 1 | 2 | 0 | .5 |
| Hats | 5 | 0 | 1 | 2 | 0 | .8 | 1 | 0 | .5 | 2 | 0 | .6 |
| Belts | 6 | 0 | 2.3 | 6 | 0 | 2.5 | 3 | 2 | 1.2 | 5 | 0 | 3.2 |
| Towels | 6 | 2 | 3 | 6 | 1 | 3.8 | 6 | 1 | 3.5 | 5 | 2 | 3.3 |
| Face cloths | 3 | 0 | 1.4 | 4 | 0 | 1.7 | 7 | 1 | 3.5 | 3 | 0 | 1.7 |
| Pillows, bed | 2 | 1 | 1 | 4 | 0 | 1.2 | 2 | 1 | 1.2 | 1 | 0 | .9 |
| Bathing suits | 2 | 0 | 1.1 | 4 | 1 | 1.3 | 2 | 1 | 1.5 | 3 | 1 | 2 |
| Shoes | 9 | 3 | 4.8 | 10 | 2 | 4.8 | 6 | 3 | 3.7 | 9 | 2 | 5.5 |
| Boots | 3 | 0 | .5 | 2 | 0 | .3 | 2 | 0 | 1 | 2 | 0 | .4 |
| Radio | 1 | 0 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | 3 | 0 | .9 |
| Phonograph | 1 | 0 | .4 | 1 | 0 | .4 | 1 | 0 | .7 | 2 | 0 | .7 |
| Records (ht.of stack) | 11" | 2" | 8" | 30" | 3" | 11" | 10" | 5" | 6" | 24" | 3" | 14" |
| Tape recorder | 1 | 0 | .3 | 1 | 0 | .3 | 1 | 0 | .2 | 1 | 0 | .8 |
| Tapes | 4 | 2 | 3 | 20 | 3 | 13 | 6 | 0 | 1.2 | 12 | 0 | 5 |
| T.V. | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | .5 | 0 | 0 | 0 |

TABLE NO. ONE (Continued)

INVENTORY SUMMARY - MEN

NUMBERS SHOW QUANTITY OF LISTED ITEMS PER STUDENT

| | DAVIS | | | LOS ANGELES | | | RIVERSIDE | | | SANTA BARBARA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HIGH | LOW | AVE | HIGH | LOW | AVE | HIGH | LOW | AVE | HIGH | LOW | AVE |
| Books-length along shelf | 14' | 2' | 5' | 22' | 12" | 6'6" | 13' | 5' | 8' | 7'4" | 12" | 3'2" |
| Typewriter | 1 | 0 | 1 | 1 | 0 | .3 | 1 | 1 | 1 | 1 | 1 | 1 |
| Iron | 1 | 0 | .8 | 1 | 0 | .6 | 1 | 1 | 1 | 1 | 1 | 1 |
| Bicycle | 2 | 0 | 1 | 1 | 0 | .1 | 1 | 0 | .5 | 1 | 0 | .4 |
| Scooter or motorcycle | 1 | 0 | .2 | 1 | 0 | .2 | 1 | 0 | .2 | 1 | 0 | .2 |
| Car | 1 | 0 | .6 | 1 | 0 | .6 | 1 | 1 | 1 | 1 | 0 | .3 |
| Sample Size | | | 14 | | | 20 | | | 4 | | | 8 |

## 5. INVENTORY SUMMARY - WOMEN

The following Table No. Two summarizes the quantities of possessions for women on the four University of California campuses. The quantities are expressed as the low, the high, and as an average.

No discernible pattern of quantities relating to academic class level was discovered. Therefore this summary does not include the student's class level.

TABLE NO. TWO
INVENTORY SUMMARY - WOMEN

NUMBERS SHOW QUANTITY OF LISTED ITEMS PER STUDENT

| | DAVIS | | | LOS ANGELES | | | RIVERSIDE | | | SANTA BARBARA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HIGH | LOW | AVE | HIGH | LOW | AVE | HIGH | LOW | AVE | HIGH | LOW | AVE |
| Suits | 6 | 1 | 3 | 9 | 1 | 4.1 | 6 | 2 | 4.2 | 6 | 2 | 3.3 |
| Skirts | 25 | 2 | 12 | 13 | 5 | 10.7 | 17 | 9 | 14 | 19 | 5 | 11 |
| Dresses | 27 | 1 | 10.3 | 23 | 2 | 9.6 | 18 | 14 | 16.3 | 22 | 0 | 12 |
| Formal (long) | 2 | 0 | .7 | 2 | 0 | .5 | 2 | 0 | .6 | 2 | 0 | 1 |
| Jacket (light) | 3 | 0 | 1.2 | 3 | 0 | .9 | 2 | 1 | 1.6 | 1 | 0 | .7 |
| Jacket (heavy) | 3 | 0 | 1 | 1 | 0 | .5 | 1 | 1 | 1 | 2 | 0 | 1 |
| Overcoat (light) | 2 | 0 | 1 | 2 | 0 | .9 | 1 | 1 | 1 | 3 | 0 | 1.2 |
| Overcoat (heavy) | 2 | 0 | 1 | 2 | 0 | 1 | 2 | 1 | .8 | 2 | 0 | .9 |
| Raincoat | 2 | 0 | 1 | 1 | 0 | .6 | 2 | 0 | 1 | 2 | 0 | 1 |
| Robe | 3 | 1 | 2 | 8 | 1 | 2 | 6 | 1 | 3 | 5 | 1 | 2.3 |
| Slacks, jeans | 8 | 2 | 4.7 | 8 | 2 | 4.6 | 8 | 7 | 7.6 | 14 | 2 | 7.3 |
| Shirts, blouses | 35 | 5 | 17 | 29 | 4 | 14.2 | 33 | 12 | 20 | 35 | 8 | 21.7 |
| Shorts, Burmudas | 8 | 0 | 3 | 5 | 0 | 2.8 | 8 | 5 | 6.3 | 8 | 1 | 5.2 |
| Sweaters (light) | 10 | 2 | 6 | 11 | 2 | 5.1 | 19 | 5 | 10 | 15 | 0 | 7.7 |
| Sweaters (heavy) | 12 | 2 | 4.5 | 10 | 2 | 5 | 10 | 4 | 7.6 | 16 | 0 | 5 |
| Sweatshirts | 5 | 0 | 1.2 | 4 | 0 | 1.3 | 5 | 2 | 3.3 | 5 | 1 | 2.5 |
| Underwear | 36 | 10 | 18.4 | 36 | 12 | 19.4 | 34 | 23 | 28.6 | 40 | 14 | 24.5 |
| Nightgowns, P.J.'s | 6 | 2 | 4.1 | 10 | 2 | 4.6 | 9 | 4 | 6.6 | 6 | 3 | 4.8 |
| Socks | 12 | 0 | 4.3 | 5 | 0 | 1.5 | 12 | 5 | 7.6 | 18 | 1 | 6 |
| Stockings | 10 | 2 | 5.7 | 20 | 3 | 8.2 | 15 | 4 | 6.6 | 20 | 3 | 8.1 |
| Scarves | 10 | 2 | 4.3 | 15 | 0 | 4.1 | 8 | 2 | 5.3 | 10 | 1 | 4.5 |
| Gloves | 8 | 1 | 3.3 | 6 | 1 | 2.9 | 5 | 3 | 4 | 10 | 1 | 3.5 |
| Belts | 20 | 0 | 4.5 | 10 | 0 | 1.5 | 4 | 0 | 2 | 15 | 0 | 3.6 |
| Hats, caps | 2 | 0 | 1 | 7 | 0 | 1.5 | 3 | 1 | 2.3 | 2 | 0 | 4 |
| Towels | 6 | 1 | 2.6 | 6 | 0 | 2.8 | 8 | 2 | 4.3 | 5 | 2 | 3 |
| Face Cloths | 4 | 0 | 1.7 | 12 | 0 | 2.9 | 5 | 3 | 4 | 3 | 2 | 2.2 |
| Pillows, bed | 2 | 0 | .9 | 2 | 0 | 1 | 2 | 2 | 2 | 4 | 1 | 1.4 |
| Pillows, on bed | 2 | 0 | .7 | 2 | 0 | .3 | 1 | 0 | .3 | 2 | 0 | .3 |
| Bathing suits | 2 | 0 | 1.7 | 3 | 1 | 1.4 | 3 | 1 | 2 | 3 | 1 | 1.8 |
| Shoes | 24 | 7 | 13 | 20 | 4 | 10 | 25 | 11 | 17.3 | 20 | 13 | 16.6 |
| Boots | 2 | 0 | 1 | 3 | 0 | 1 | 2 | 1 | 1.6 | 2 | 0 | .8 |

TABLE NO. TWO (Continued)
INVENTORY SUMMARY - WOMEN

NUMBERS SHOW QUANTITY OF LISTED ITEMS PER STUDENT

| | DAVIS | | | LOS ANGELES | | | RIVERSIDE | | | SANTA BARBARA | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HIGH | LOW | AVE | HIGH | LOW | AVE | HIGH | LOW | AVE | HIGH | LOW | AVE |
| Purses (large) | 5 | 0 | 1.8 | 5 | 1 | 3 | 5 | 1 | 3.6 | 5 | 2 | 3 |
| Purses (small) | 8 | 0 | 3.3 | 4 | 2 | 3 | 7 | 2 | 3.6 | 7 | 2 | 4 |
| Radio | 2 | 0 | .9 | 2 | 0 | .7 | 2 | 1 | 1.2 | 2 | 1 | 1.2 |
| Phonograph | 1 | 0 | .3 | 1 | 0 | .4 | 1 | 1 | 1 | 1 | 0 | .7 |
| Records (ht.of stack) | 15" | 5" | 8" | 30" | 3" | 11" | 24" | 6" | 12" | 30" | 1" | 9.5" |
| Tape recorder | 0 | 0 | 0 | 1 | 0 | .1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tapes | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| T.V. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Books-length alng shelf | 8' | 1' | 3'6" | 8' | 1' | 3'6" | 12' | 5' | 8'6" | 12' | 3' | 6'4" |
| Typewriter | 1 | 0 | 1 | 1 | 0 | .7 | 1 | 1 | 1 | 1 | 0 | .9 |
| Iron | 1 | 0 | .8 | 1 | 0 | .9 | 1 | 1 | 1 | 1 | 0 | .9 |
| Hairdryer | 1 | 0 | .8 | 1 | 0 | .8 | 1 | 1 | 1 | 1 | 1 | 1 |
| Bicycle | 1 | 0 | .7 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| Scooter or motorcycle | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | .3 | 0 | 0 | 0 |
| Car | 1 | 0 | .4 | 1 | 0 | .2 | 1 | 0 | .3 | 1 | 0 | .1 |
| Sample Size | | | 13 | | | 19 | | | 3 | | | 12 |

Men
Women

## 6. GRAPHIC ILLUSTRATION OF STORAGE REQUIREMENTS

The range of volumes required to accommodate the low, the high and the average quantities of student possessions are hereinafter illustrated. The solid lines delineate the volumes and areas specifically appropriate to the basic items. The dotted lines delineate the space allocated to the optional items.

As coats and dresses require long hanging space, while socks and underwear are stored in containers such as drawers, the volumes drawn with dotted lines illustrate the possible variations in storing. Such volumes have been shown more than once, according to each possible mode of storing the items. Records and typewriters, for example, could be kept either on open shelves or in cupboards. Although jackets would fit into short hanging space, people tend to hang them in the longer spaces associated with outdoor wear. Jackets are therefore represented in both spaces.

Note that the "high" and the "low" volumes are totals of the high and low quantity of each item recorded. The space allocation used for each item is shown in Table No. Three. The illustrations show the estimated storage requirements according to the inventories for the men and women at the Riverside campus.

## BASIS OF SPACE ALLOCATION

### I. VOLUME STORAGE - CONTAINER

| ITEM | CUBIC FEET PER ITEM |
|---|---|
| Towel | .25 |
| Face cloth | .05 |
| Bathing suit | .12 |
| Purse (large) | .5 |
| Purse (small) | .2 |
| Underwear | 1.0/15 items |
| Nightgown | .1 |
| Pajamas | .2 |
| Sweatshirt | .2 |
| Sweater (heavy) | .3 |
| Sweater (light) | .2 |
| Socks | .05 |
| Stockings | .02 |
| Scarf | .02 |
| Gloves | .04 |
| Belt | .01 |

OPTIONAL ITEMS

| | |
|---|---|
| Slacks | .3 |
| Jeans | .3 |
| Shirt | .2 |
| Blouse | .2 |
| Shorts | .2 |
| Bermudas | .2 |

### II. VOLUME STORAGE - SHORT HANGING

| ITEM | CUBIC FEET PER ITEM |
|---|---|
| Suit | 1.0 |
| Skirt | .8 |
| Jacket (light) | 1.0 |

OPTIONAL ITEMS

| | |
|---|---|
| Slacks, jeans | 1.0 |
| Shirt, blouse | .8 |
| Shorts, bermudas | 1.0 |
| Jacket (heavy) | 1.2 |

### III. VOLUME STORAGE - LONG HANGING

| | |
|---|---|
| Dress | 2.0 |
| Formal | 5.0 |
| Robe | 2.0 |
| Overcoat (light) | 2.5 |
| Overcoat (heavy) | 3.0 |
| Raincoat | 2.0 |

OPTIONAL ITEMS

| | |
|---|---|
| Jacket | 3.0 |
| Slacks | 1.5 |

## IV. VOLUME STORAGE - MISCELLANEOUS ITEMS

| ITEM | CUBIC FEET PER ITEM |
|---|---|
| Hat, cap | .5 |
| Shoes, sandals | .2 |
| Boots | .5 |
| Shoe equipment | .05/pair |
| Soiled laundry | 3.0/student |
| Hairdryer | .5 |
| Iron | .2 |
| Food stuff | - |
| Sports equipment | - |

OPTIONAL ITEMS

| | |
|---|---|
| Typewriter | .5 |
| Records | .1/inch |
| Musical instruments: | |
| Guitar, banjo, tuba, trombone | 5.0 |
| Trumpet, clarinet | 1.0 |

## V. AREA STORAGE - MISCELLANEOUS ITEMS

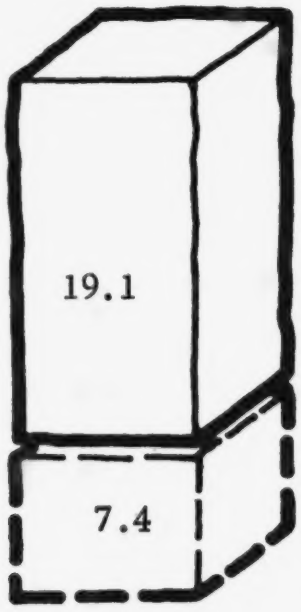
| ITEM | SQUARE FEET PER ITEM |
|---|---|
| Phonograph | 1.5 |
| Tape recorder | 1.5 |
| TV | 1.5 |
| Radio | 1.0 |
| Clock | .2 |
| Sewing equipment | 1.0/student |
| Books | 1.0/foot |

OPTIONAL ITEMS

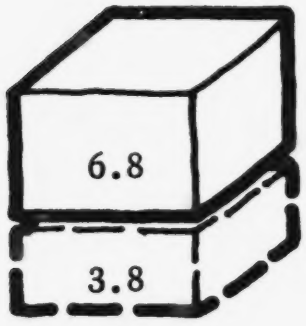
| | |
|---|---|
| Records | .1/inch |
| Typewriter | 1.0 |
| Musical instruments: | |
| Guitar, banjo, tuba, trombone | 2.0 |
| Trumpet, clarinet | 1.0 |

WOMEN - RIVERSIDE CAMPUS

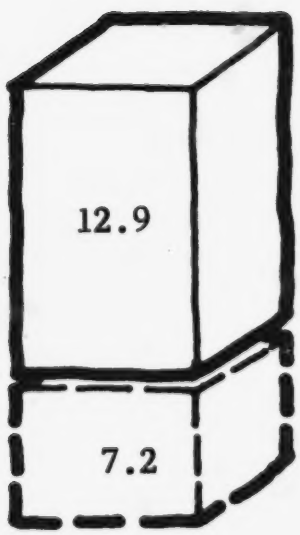
I. VOLUME STORAGE - CONTAINER




23.5 cubic feet-Maximum Volume




10.6 cubic feet-Maximum Volume




20.1 cubic feet-Average Volume

scale of feet

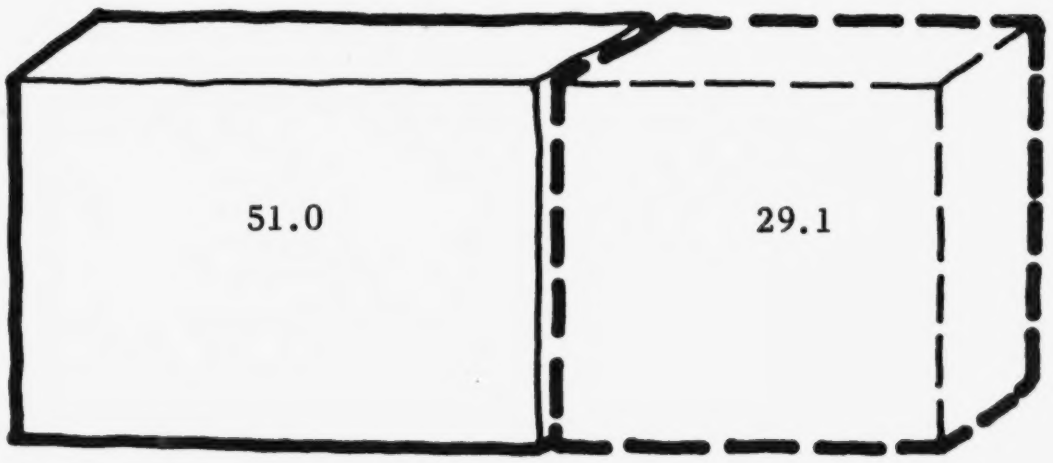
BASIC ITEMS:

TOWELS
FACE CLOTHS
BATHING SUITS
PURSES
UNDERWEAR
NIGHTGOWNS
PAJAMAS
SWEATERS
SWEATSHIRTS
SOCKS
STOCKINGS
SCARVES
GLOVES
BELTS
SLACKS
JEANS
SHORTS
BERMUDAS
SHIRTS
BLOUSES

(Space allocated to optional items is shown dotted)

## II. VOLUME STORAGE - SHORT HANGING

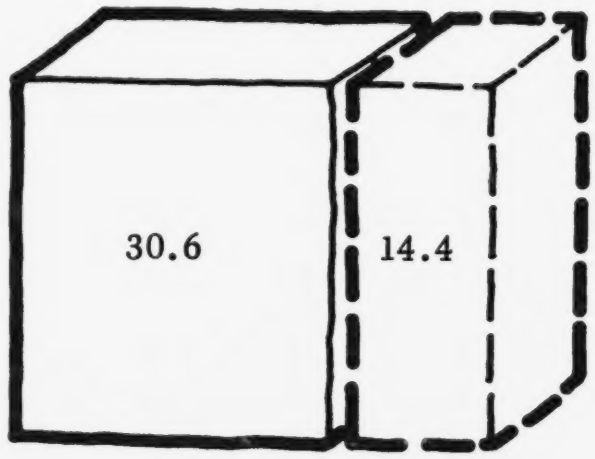
scale of feet




80.1 cubic feet
Maximum Volume

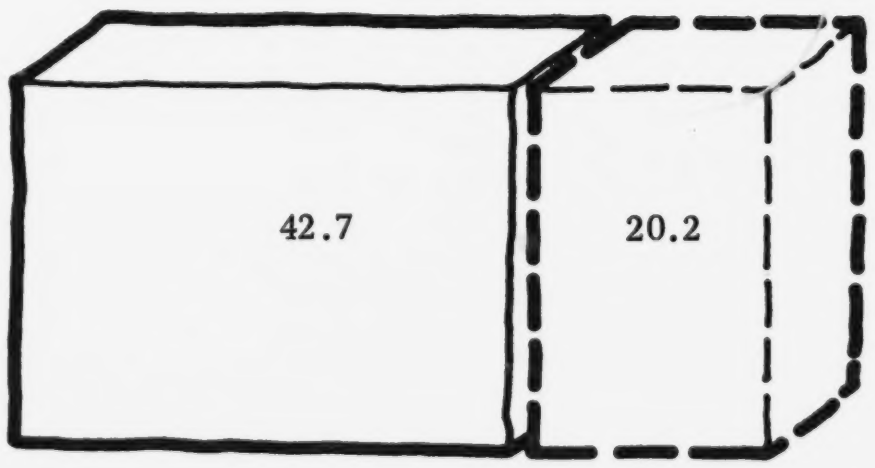
ITEM:

SUITS
SKIRTS
JACKETS
SLACKS
JEANS
BLOUSES
SHIRTS
SHORTS/
BERMUDAS



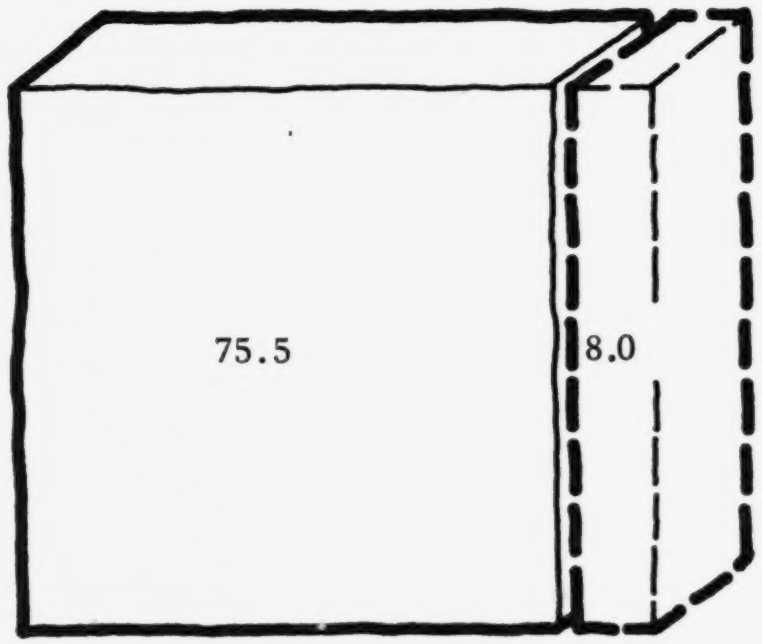

45.0 cubic feet
Minimum Volume

(Space allocated to optional items is shown dotted)

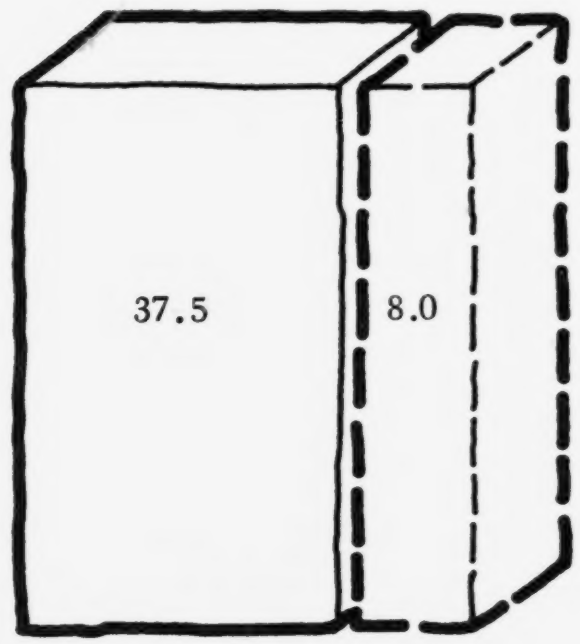



62.9 cubic feet
Average Volume

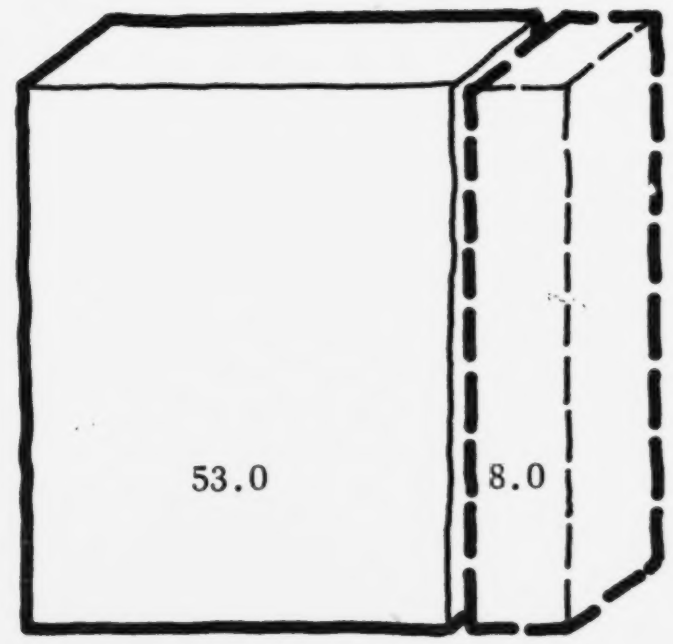
## III. VOLUME STORAGE - LONG HANGING




83.5 cubic feet
Maximum Volume




45.5 cubic feet
Minimum Volume




61.0 cubic feet
Average Volume

scale of feet

ITEM:

DRESSES

FORMALS

OVERCOATS

RAINCOATS

ROBES

OPTIONAL ITEMS:

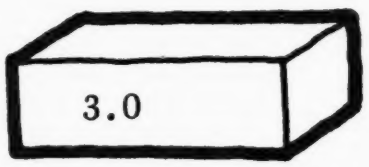
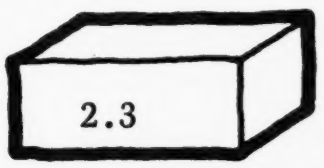
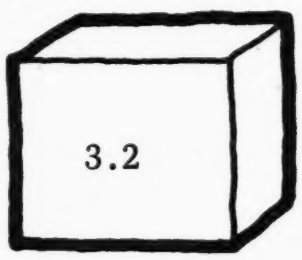
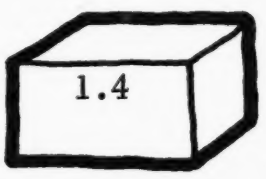
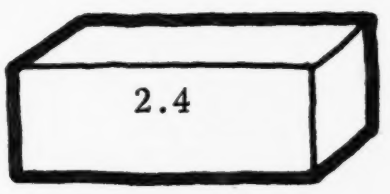
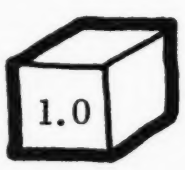
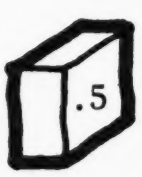
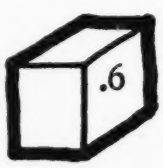
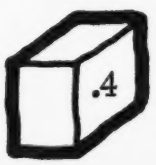
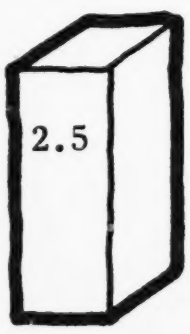
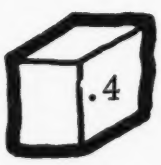
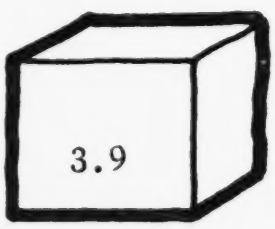
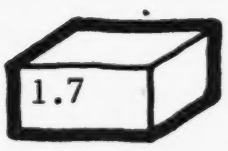
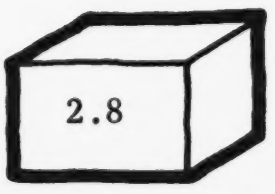
JACKETS

SLACKS

(Space allocated to optional items is shown dotted)

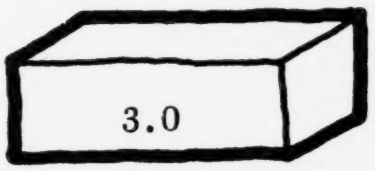
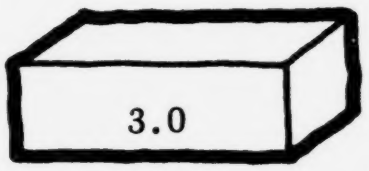
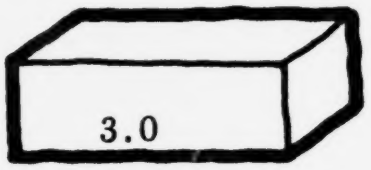
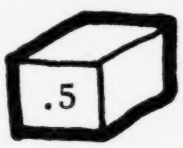
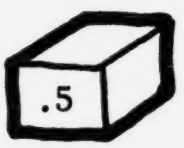
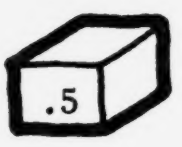
## IV. VOLUME STORAGE - MISCELLANEOUS ITEMS

scale of feet

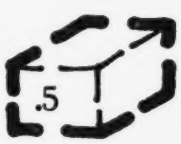
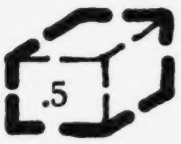
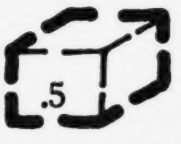
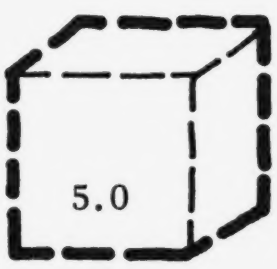
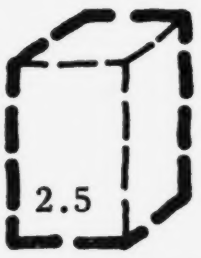
| Maximum Volume | Minimum Volume | Average Volume | (cubic feet) ITEMS: |
|---|---|---|---|
|   | |   | HATS/CAPS |
|   |   |   | SHOES SANDALS |
|   |   | | BOOTS |
|   | |   | SHOE EQUIPMENT |
|   |   | | SPORTS EQUIPMENT |
|   |   |   | FOOD STUFFS |

IV - (CONTINUED)

scale of feet

| Maximum Volume | Minimum Volume | Average (cubic feet) Volume | ITEMS: |
|---|---|---|---|
|   |   |   | LAUNDRY |
|   |   |   | HAIRDRYER |
| | | | IRON |

OPTIONAL ITEMS:

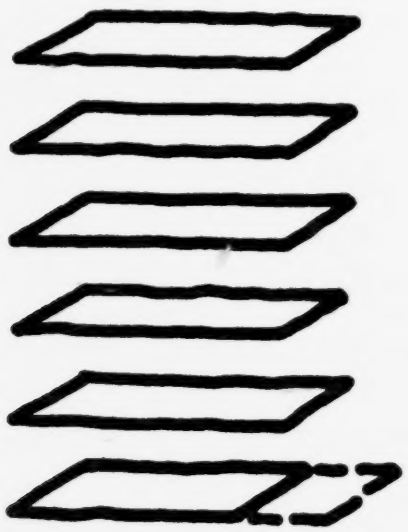
| | | | |
|---|---|---|---|
| | | | RECORDS |
|   |   |   | TYPEWRITER |
|   | |   | MUSICAL INSTRUMENTS |

(Space allocated to optional items is shown dotted)

## V. AREA STORAGE - MISCELLANEOUS ITEMS

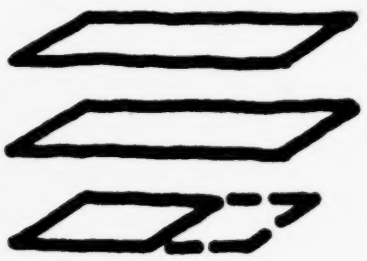
scale of feet

Maximum Area



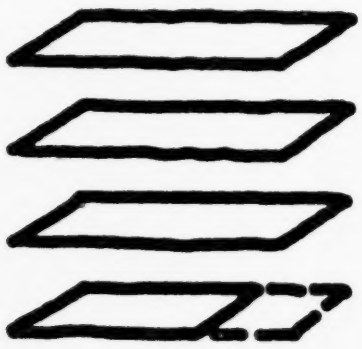
17.2 square feet

Minimum Area



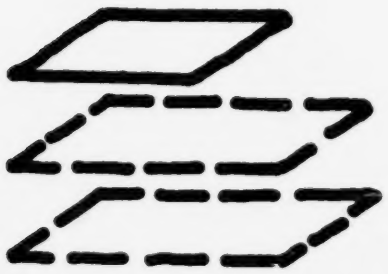
7.2 square feet

Average Area



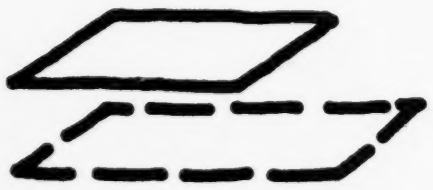
Narrow Surface

11.7 square feet



8.5 square feet

3.5 square feet



Wide Surface

6.0 square feet

ITEM:

PHONOGRAPH
TAPE RECORDER
TELEVISION
SEWING EQUIPMENT
RADIO
CLOCK
BOOKS

OPTIONAL ITEMS:

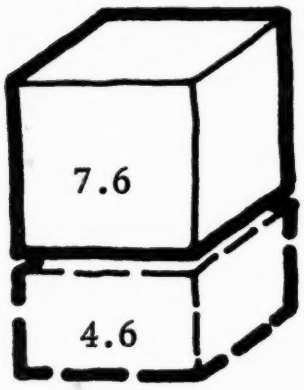
RECORDS
TYPEWRITER
MUSICAL INSTRUMENTS

(Space allocated to optional items is shown dotted)

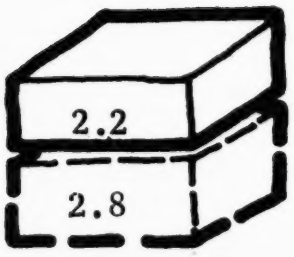
MEN - RIVERSIDE CAMPUS

scale of feet

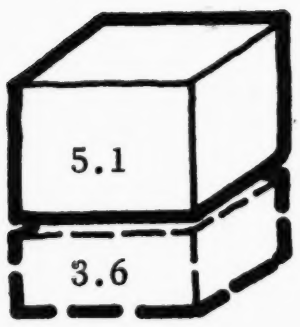
I. VOLUME STORAGE - CONTAINER




12.2 cubic feet-Maximum Volume




5.0 cubic feet-Minimum Volume



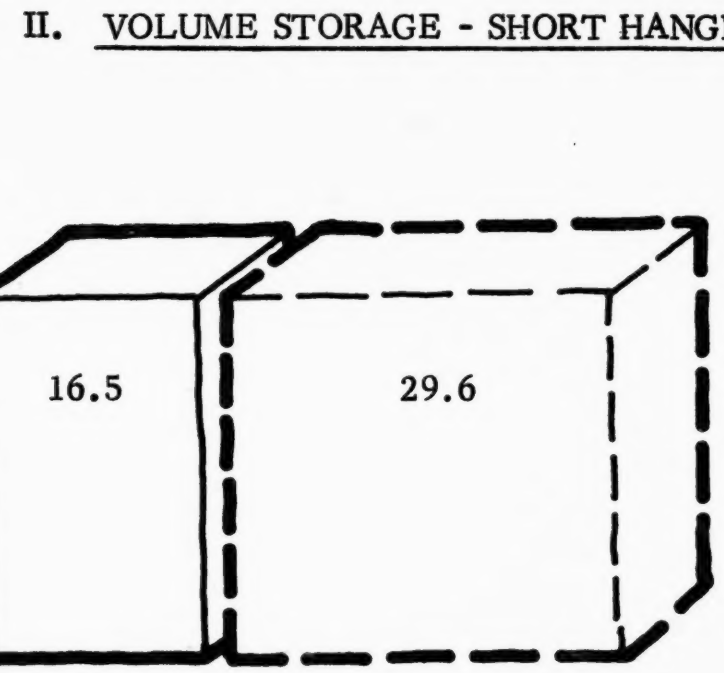

8.7 cubic feet-Average Volume

BASIC ITEMS:

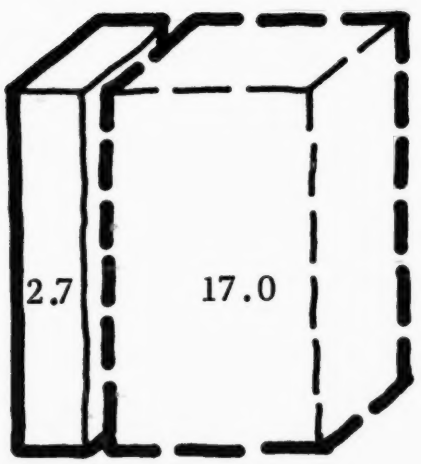
- TOWELS
- FACE CLOTHS
- BATHING SUITS
- SWEATERS
- SWEATSHIRTS
- UNDERWEAR
- PAJAMAS
- SOCKS
- GLOVES
- BELTS
- HATS
- PANTS
- SHIRTS
- BERMUDAS
- JEWELRY

(Space allocated to optional items is shown dotted)

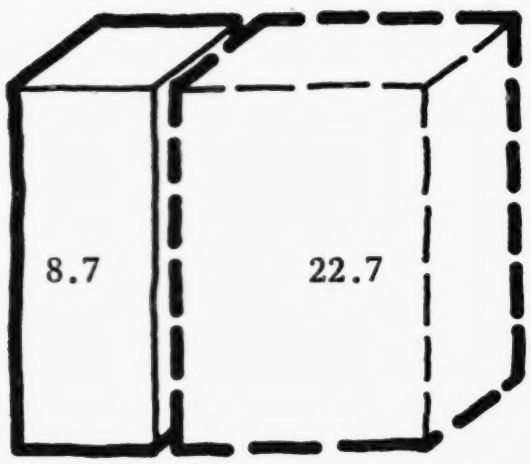
## II. VOLUME STORAGE - SHORT HANGING




46.1 cubic feet
Maximum Volume




19.7 cubic feet
Minimum Volume



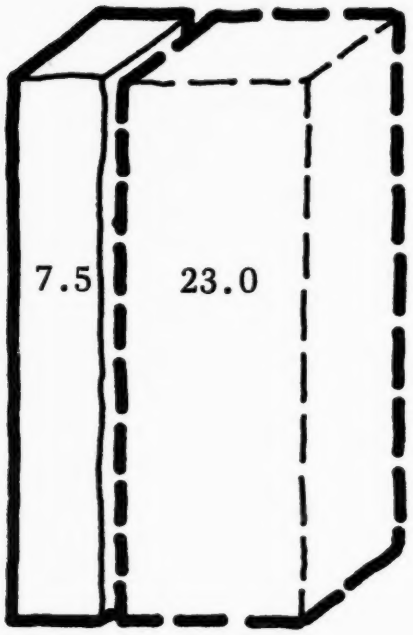

31.4 cubic feet
Average Volume

ITEM:

SUITS
SPORT COATS
JACKETS
SLACKS
PANTS
SHIRTS
BERMUDAS
TIES

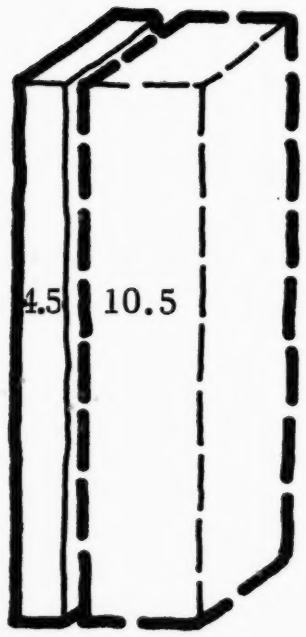
(Space allocated to optional items is shown dotted)

## III. VOLUME STORAGE - LONG HANGING




scale of feet

30.5 cubic feet -Maximum Volume




15.0 cubic feet-Minimum Volume

ITEM:

OVERCOAT

RAINCOAT

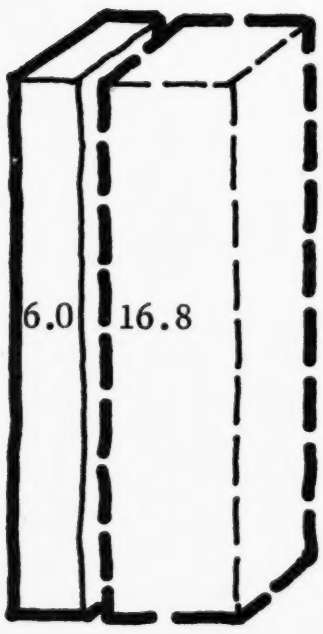
ROBE

OPTIONAL ITEMS:

SLACKS

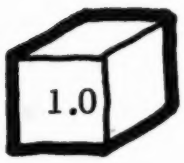
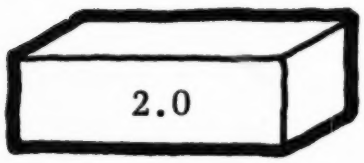
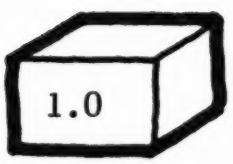
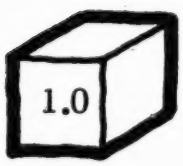
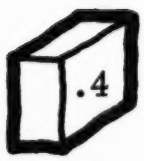
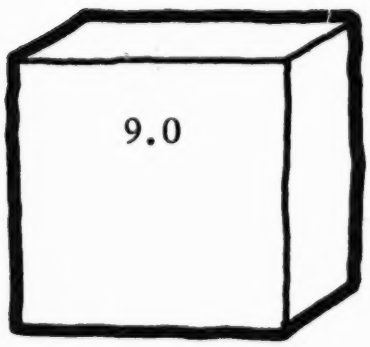
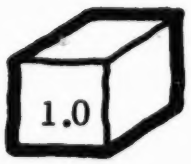
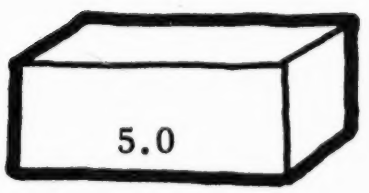
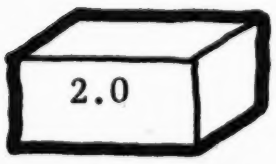
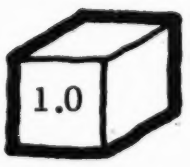
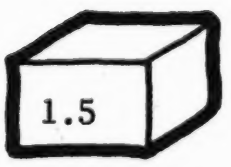
JACKET

(Space allocated to optional items is shown dotted)

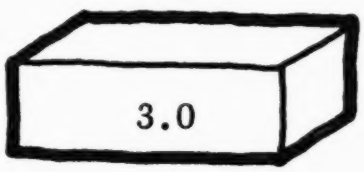
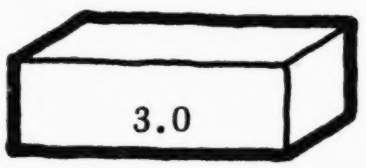
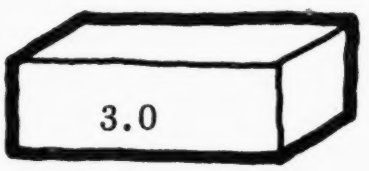
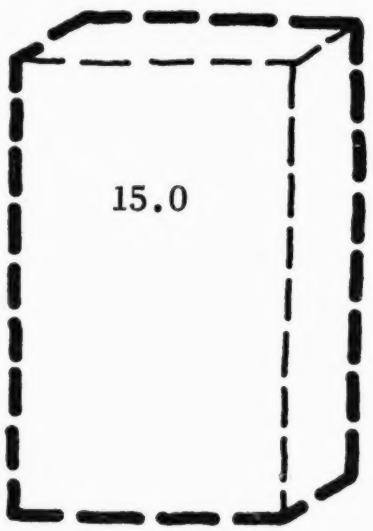
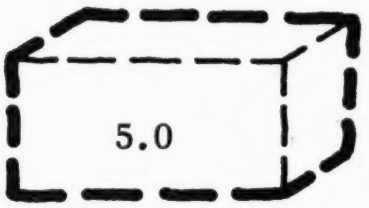
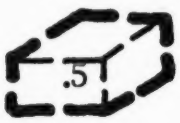
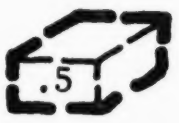
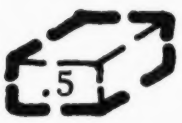



22.8 cubic feet-Average Volume

## IV. VOLUME STORAGE - MISCELLANEOUS ITEMS

| Maximum Volume | Minimum Volume | Average Volume (cubic feet) | |
|---|---|---|---|
|   | - | | HATS/CAPS |
|   |   | | SHOES SANDALS |
|   | - | | BOOTS |
|   | | | SHOE EQUIPMENT |
|   |   |   | SPORTS EQUIPMENT |
|   |   |   | FOOD STUFFS |

IV. (CONTINUED)

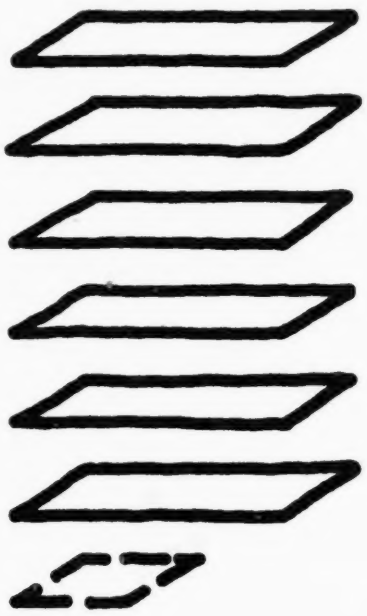
| Maximum Volume | Minimum Volume | Average Volume (cubic feet) | ITEMS: |
|---|---|---|---|
|   |   |   | LAUNDRY |
| | | | IRON |
| | | | OPTIONAL ITEMS: |
|   | |   | MUSICAL INSTRUMENTS |
|   |   |   | TYPEWRITER |
| | | | RECORDS |

(Space allocated to optional items is shown dotted)

## V. AREA STORAGE - MISCELLANEOUS ITEMS

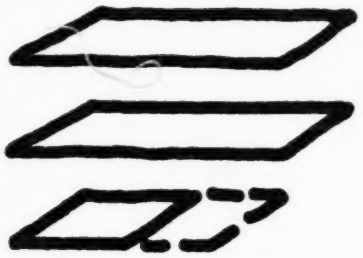
scale of feet

Maximum Area



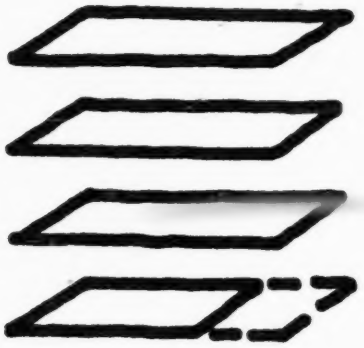
19.2 square feet

Minimum Area



7.7 square feet

Average Area

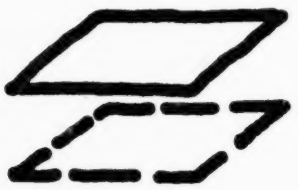


Narrow Surface

12.5 square feet

10.0 square feet

2.0 square feet



Wide Surface

6.0 square feet

| ITEM: | | OPTIONAL ITEMS: |
|---|---|---|
| PHONOGRAPH | RADIO | RECORDS |
| TAPE RECORDER | CLOCK | TYPEWRITER |
| TELEVISION | BOOKS | MUSICAL INSTRUMENTS |

(Space allocated to optional items is shown dotted)

## 7. TABULATION OF QUESTIONNAIRE RESPONSES

This section gives the tabulation of the questionnaire based on the responses from the four University of California campuses at Davis, Los Angeles, Riverside and Santa Barbara.

1. If it would provide you with more space within your room, would you prefer to store some items elsewhere (e.g., luggage, sports equipment, long formals)?

   No answer: 1
   Yes: 55
   No: 37

2. What provision for your own food preparation would you like to have?

   a. In your room

      Wired for hotplate: 15
      Refrigerator: 9
      Stove: 5
      Sink: 3
      Storage cabinets: 1

   b. On your floor

      Refrigerator: 17
      Kitchen: 17
      Stove: 15
      Hotplate: 7
      Sink: 4
      Pots and pans: 2

   c. Somewhere in the dorm

      Kitchen: 5
      Refrigerator: 3
      Oven: 2
      Snackbar: 1
      Ice machine: 1
      Dining hall: 1
      Coke machine: 1

   No answer: 10

3. Where do you do your hand laundry?

   Bathroom: 45
   Laundry room: 44
   Laundromat: 2

Where do you do your ironing?

Laundry room: 61
Own room: 20
Send out: 3
Hall: 2
Maid's closet: 1
Luggage room: 1
Lounge: 1

4. Do you presently have your own:

Bedspread: 42
Blankets: 83
Sheets: 0
Lamp: 50
Chair: 12
Wastebasket: 13
Other furniture
Rug: 3

5. Assuming a semi-private bath (shared by 3 to 6 students):

A. Would you prefer to store cosmetic and grooming articles:

In the bathroom in open storage: 9
In the bathroom in drawers: 46
In own room in open storage: 7
In own room in drawers: 34

B. Would you prefer to put on makeup:

Standing, in own room: 23
Standing, in bathroom: 14
Sitting, in own room: 12
Sitting, in bathroom: 0

If you use an electric shaver, would you prefer to shave at a mirror located:

Over sink in bathroom: 27
On wall in bathroom: 3
On wall in own room: 10

C. If cleaning equipment were supplied for your room and bathroom, would you prefer:

To do own cleaning: 28
To have maid service: 65

D. Do you prefer to wash your hair in:

The sink: 15
The shower: 77
The bath: 2

6. Would you consider a file drawer in your desk:

Necessary: 22
Useful: 61
Useless: 11
No answer: 1

7. Is there any special storage facility you would like in your room?

(Since there was a lot of overlap in responses to question #7 and #8, the items are combined under #8 below.)

No answer: 41

8. Additional comments on storage of student belongings:

No answer: 44

The following tabulation shows comments which students made in answer to this question. The first four comments occurred a sufficient number of times to be significant.

More bookshelves: 26
More drawers: 16
More closet space: 13
More desk drawers: 10

Small bathrooms: 1
More space for personal supplies: 2
More full length mirrors: 2
Wider bathroom lockers: 1
Rack for toothbrush: 2
More cosmetics space: 4

More flexibility in room: 1
Comfortable chair for reading: 1
Movable furniture: 1
Larger rooms: 6

Typing space: 4
Bookshelf near desk: 2
Lights in desk area: 1
Bin for projects: 1
File drawer: 1
Space for magazines: 1

8. (cont.)

Shallow drawers useless: 2
Drawer dividers for small supplies: 2
More medium sized drawers: 1
More deep drawers: 3
Drawers under bed: 3

More storage space: 1
Space for bulky coats, etc.: 1
Closet shelves for bulky items: 2
More sweater space: 2
Space for long formal: 1
Footlocker: 1
Locker for large items: 1
Cabinets with doors and shelves: 2

More shelves: 4
Record shelf: 7
Space for record player and/or tape recorder: 4

Drying lines in bathroom: 2
Drying rack: 1
Dirty laundry storage space: 2
Space for laundry supplies: 1
Space for iron and ironing board: 1

Better lighting in rooms: 5
More electric outlets: 1
Light over mirror: 1
Shoe rack: 5
Towel bar: 4
Wall hooks: 2
Tie rack: 1

Bulletin board rather than pegboard: 3
Bolsters: 1
Wall phone: 1
Better paint colors in rooms: 1

Secure storage room on floor: 6
Accessible suitcase and box storage: 3
Over-summer storage: 1
Off-season clothes storage: 1
Covered bicycle rack:

APPENDIX

UNIVERSITY RESIDENTIAL BUILDING SYSTEM
(URBS)

STUDENT STORAGE STUDY -- INVENTORY AND QUESTIONNAIRE

PLEASE CHECK:

Year: Freshman____
Sophomore___
Junior_____
Senior_____
Graduate____

Sex: M_____
F_____

Major:_____

The URBS program is developing new building components which will be used in University of California residence halls. The first buildings utilizing these components will open in 1970.

As part of the background information to the URBS program, we are interested in obtaining more detailed information than is at present available on students' possessions, and storage requirements.

These inventories and questionnaires are intended to help in providing accurate up-to-date information on the specific storage needs of different students, to enable future buildings better to accommodate these needs.

Please count carefully numbers of items you have at school, and indicate both total amounts and numbers according to varying frequency of use where applicable.

For instance, school or casual clothes, underwear, textbooks for current courses, require greatest accessibility and would be considered used frequently; dress clothes, musical instruments, or laundry items might be used occasionally--once a week or less; formal dress, ski equipment, luggage, etc. might not be used for long periods of time.

Please add items which have not been included on the list. Skip items which do not apply. Answer questions at the end of the inventory.

Thank you for your cooperation.

1. If it would provide you with more space within your room, would you prefer to store some items elsewhere (e.g., luggage, sports equipment, long formals)?

   Yes_____ No_____

2. What provision for your own food preparation would you like to have?

   a. In your room_____
   b. On your floor_____
   c. Somewhere in the dorm_____

3. Where do you do your hand laundry?_____
   Where do you do your ironing?_____

4. Do you presently have your own: bedspread?_____
   blankets?_____
   sheets?_____
   lamp?_____
   chair?_____
   wastebasket?_____
   other furniture?_____ _____
   _____
   _____

5. Assuming a semi-private bath (shared by 3 to 6 students):

   A. Would you prefer to store cosmetic and grooming articles:

      In the bathroom _____ or in your own room?_____
      In open storage_____ or in drawers?_____

   B. Would you prefer to put on makeup:

      In your room _____ or in the bathroom?_____
      Standing_____ or sitting?_____

      If you use an electric shaver, would you prefer to shave at a mirror located:

      Over sink in bath?_____
      On wall in bath?_____
      On wall in your own room?_____

   C. If cleaning equipment were supplied for your room and bathroom, would you prefer:

      To do your own cleaning_____ or have maid service?_____

   D. Do you prefer to wash your hair in:

      The sink_____ the shower _____ or the bath?_____

6. Would you consider a file drawer in your desk:

   Necessary _____, useful_____, or useless?_____

7. Is there any special storage facility you would like in your room?

   _____

   _____

   _____

8. Additional comments on storage of student belongings:

| WOMEN | MEN | TOTAL | FREQUENT USE | OCCASIONAL USE | INFREQUENT USE SEASONAL | |
|---|---|---|---|---|---|---|
| | | | | | | |
| Suits (Skirt or Pant) | Suits | | | | | |
| Skirts | Slacks | | | | | |
| Dresses | Sport Coats | | | | | |
| Formal (long) | | | | | | |
| Jacket (light) | Jackets | | | | | |
| Jacket (heavy) | | | | | | |
| Overcoat (light) | Overcoat | | | | | |
| Overcoat (heavy) | | | | | | |
| Raincoat | Raincoat | | | | | |
| Robe | Robe | | | | | |
| | Total length of hanging rod occupied by clothes | | | | | |
| Slacks, Jeans, etc. | Wash Pants, Jeans | | | | | |
| Shirts, Blouses | Shirts | | | | | |
| Shorts, Bermudas, etc. | Shorts | | | | | |
| Sweaters. light | Sweaters | | | | | |
| Sweaters, heavy | | | | | | |
| Sweatshirts | Sweatshirts | | | | | |
| Underwear (items) | T-shirts | | | | | |
| | Undershorts | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Nightgowns, Pajamas | Pajamas | | | | | |
| | | | | | | |
| Musical Instrument (kind) | Musical Instrument (kind) | | | | | |
| | | | | | | |
| Radio | Radio | | | | | |
| Phonograph | Phonograph | | | | | |
| Records (height of stack) | Records (height of stack) | | | | | |
| Tape Recorder | Tape Recorder | | | | | |
| Tapes | Tapes | | | | | |
| T.V. | T.V. | | | | | |
| Books, Paperbacks (length along shelf) | Books, Paperbacks (length along shelf) | | | | | |
| Magazines | Magazines | | | | | |
| Typewriter | Typewriter | | | | | |
| Iron | Iron | | | | | |
| Hair Dryer | | | | | | |

| WOMEN | MEN | TOTAL | FREQUENT USE | OCCASIONAL USE | INFREQUENT SEASONAL | |
|---|---|---|---|---|---|---|
| Food Preparation | Food Preparation | | | | | |
| Equipment: list | Equipment: list | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Food: list | Food: list | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Socks | Socks | | | | | |
| Stockings | | | | | | |
| Scarves | Scarves | | | | | |
| Gloves | Gloves | | | | | |
| Belts | Belts | | | | | |
| Hats, Caps | Hats, Caps | | | | | |
| | | | | | | |
| Towels | Towels | | | | | |
| Face Cloths | Face Cloths | | | | | |
| Pillows, Bed | Pillows, Bed | | | | | |
| Pillows, Scatter | Pillows, Scatter | | | | | |
| Bathing Suits | Bathing Suits | | | | | |
| Shoes, Sneakers, Sandals | Shoes, Sneakers, Sandals | | | | | |
| Boots | Boots | | | | | |
| | | | | | | |
| Purses (large) | | | | | | |
| Purses (small) | | | | | | |
| Jewelry | Jewelry | | | | | |
| Sports Equipment (list) | Sports Equipment (list) | | | | | |
| Sleeping Bag | Sleeping Bag | | | | | |
| Tennis Racket | Tennis Racket | | | | | |
| Other | Other | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| WOMEN | MEN | TOTAL | FREQUENT USE | OCCASIONAL | INFREQUENT SEASONAL | |
|---|---|---|---|---|---|---|
| | | | | | | |
| Other Supplies-e.g., Paints, Sewing | Equipment, Buddhas, Boomerangs | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Games-e.g., Scrabble, Cards, Go | Games | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Shoe Cleaning Equipment | Shoe Cleaning Equipment | | | | | |
| Laundry Supplies (no. boxes,bottles) | Laundry Supplies (no. boxes, bottles) | | | | | |
| | | | | | | |
| | | | | | | |
| Trunk | Trunk | | | | | |
| Suitcases | Suitcases | | | | | |
| Overnight or Vanity Case | Overnight bag | | | | | |
| Bicycle | Bicycle | | | | | |
| Scooter or Motorcycle | Scooter or Motorcycle | | | | | |
| Car | Car | | | | | |